

Register by mail or in person. Application forms are available upon request to *Business and Professional Courses*, 84 Queen's Park, Toronto. Telephone: 928-2393 or 928-2394.

REGISTRATION

Room 116 - Galbraith Building — Fee: \$60

COMMENCING OCTOBER 11, 1967

20 Sessions: Wednesdays — 7:30 p.m.

ULTIMATE BEHAVIOUR OF REINFORCED CONCRETE MEMBERS

Room 216 - Galbraith Building — Fee: \$35

COMMENCING OCTOBER 12, 1967

10 Sessions: Thursdays — 7:30 p.m.

CONCRETE AND SOIL-CEMENT PAVING

Div. of Ext.
22-8-74

DIVISION OF EXTENSION — UNIVERSITY OF TORONTO

will conduct two courses



1

CONCRETE AND SOIL-CEMENT PAVING

2

ULTIMATE BEHAVIOUR OF REINFORCED CONCRETE MEMBERS

ULTIMATE BEHAVIOUR OF REINFORCED CONCRETE MEMBERS

LECTURERS

Professor S. M. UZUMERI - Professor J. TIMUSK - Professor M. W. HUGGINS

Department of Civil Engineering, University of Toronto

"Ultimate Behaviour of Reinforced Concrete Members" is a 20 session course offering a fundamental study of the ultimate strength and behaviour of the reinforced concrete members subjected to axial and transverse loads. The early part of the course will be devoted to the development of the fundamental relationships and the study of the behaviour of the members starting from the stress-strain diagrams of the concrete and steel, and compatibility of strain.

Relations between results of research and current design specifications (NBC-1965) will be examined.

Creep and shrinkage and their effect on reinforced concrete members will be discussed. An introduction to the behaviour of reinforced concrete structures will be made. A number of numerical examples will be worked out in the class to illustrate the application of the fundamental concepts and to introduce some of the new design aids.

CONCRETE AND SOIL-CEMENT PAVING

LECTURERS

Professor M. M. DAVIS

Department of Civil Engineering, University of Toronto

P. SMITH - G. P. WILSON - G. A. WRONG

Department of Highways, Ontario

D. L. MACKINNON

Standard Paving Limited

E. L. KAWALA - G. D. TIMM - R. S. MARTIN

Portland Cement Association

"Concrete and Soil-Cement Paving" is a 10 session course covering the design, construction and inspection of both concrete and soil-cement pavements.

Recommendations will be made for subgrade and sub-base construction and also for the design, testing and inspection of concrete mixes for paving.

Latest design criteria for pavement thickness calculations will be presented.

Jointing of concrete pavements will be discussed and also latest developments in the use of continuous reinforcement.

Construction techniques and equipment required to build both urban streets and expressways will be covered.

Maintenance practices will be mentioned, as will the findings of the AASHO Road Test and the economics of pavement design.

This course will be of interest to Professional Engineers or senior registered technicians.

THE DIVISION OF EXTENSION — UNIVERSITY OF TORONTO

OFFERED IN CO-OPERATION WITH
THE PORTLAND CEMENT ASSOCIATION

AmB